

Dim. Inches		Millimeters		Notes
Min.	Max.	Min.	Max.	
A	---	2.450	---	62.23
B	1.350	1.400	34.29	35.56
C	0.700	0.800	17.78	20.32
D	---	0.625	---	15.88
E	3.140	3.160	79.76	80.26
F	---	3.650	---	92.71
G	0.280	0.300	7.140	7.670 Dia.

TO-244AB

- Schottky Barrier Rectifier
- Guard Ring Protection
- 300 Amperes/35 to 50 Volts
- 175°C Junction Temperature
- Reverse Energy Tested

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
FST30035*	35V	35V
FST30040*	40V	40V
FST30045*	45V	45V
FST30050*	50V	50V

*Add Suffix A for Common Anode, D for Doubler

Electrical Characteristics

Average forward current per pkg	$I_F(AV)$ 300 Amps	$T_C = 136^\circ C$, Square wave, $R_{\theta JC} = 0.20^\circ C/W$
Average forward current per leg	$I_F(AV)$ 150 Amps	$T_C = 136^\circ C$, Square wave, $R_{\theta JC} = 0.40^\circ C/W$
Maximum surge current per leg	I_{FSM} 2000 Amps	8.3ms, half sine, $T_J = 175^\circ C$
Maximum repetitive reverse current per leg	$I_{R(OV)}$ 2 Amps	$f = 1$ KHZ, $25^\circ C$
Max peak forward voltage per leg	V_{FM} 0.70 Volts	$I_{FM} = 200A$; $T_J = 125^\circ C^*$
Max peak forward voltage per leg	V_{FM} 0.76 Volts	$I_{FM} = 200A$; $T_J = 25^\circ C^*$
Max peak reverse current per leg	I_{RM} 75 mA	V_{RRM} , $T_J = 125^\circ C^*$
Max peak reverse current per leg	I_{RM} 4.0 mA	V_{RRM} , $T_J = 25^\circ C$
Typical junction capacitance per leg	C_J 4600 pF	$V_R = 5.0V$, $T_C = 25^\circ C$

*Pulse test: Pulse width 300 usec, Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	$-55^\circ C$ to $175^\circ C$
Operating junction temp range	T_J	$-55^\circ C$ to $175^\circ C$
Max thermal resistance per leg	$R_{\theta JC}$	$0.40^\circ C/W$ Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	$0.20^\circ C/W$ Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	$0.08^\circ C/W$ Case to sink
Terminal Torque		35-50 inch pounds
Mounting Base Torque		30-40 inch pounds
Weight		3.4 ounces (95 grams) typical

FST30035 — FST30050

Figure 1
Typical Forward Characteristics — Per Leg

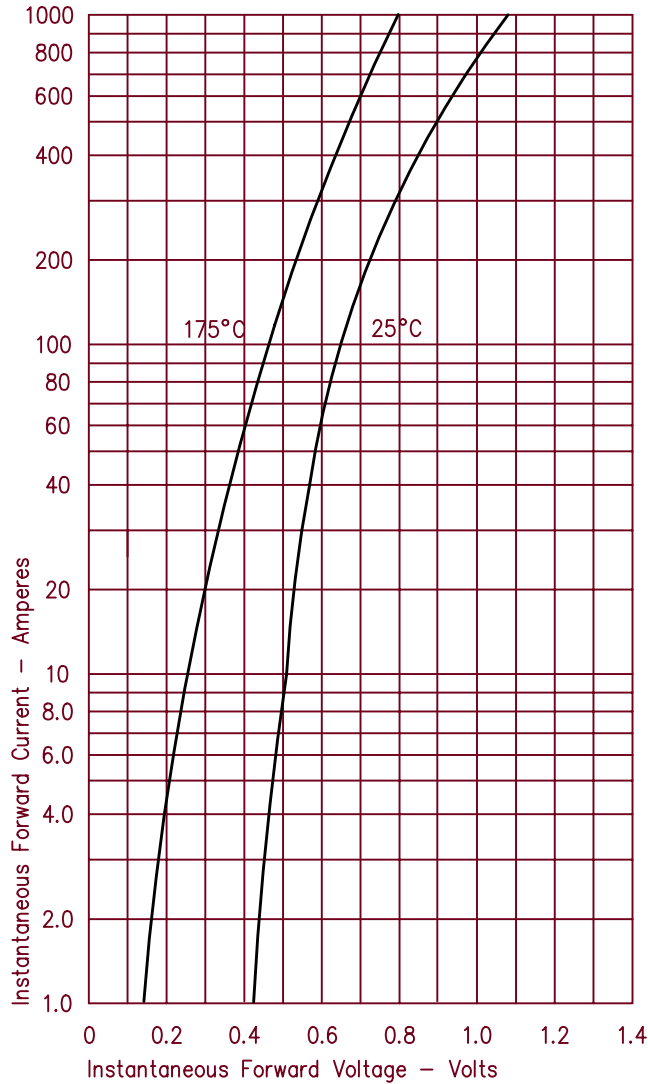


Figure 3
Typical Junction Capacitance — Per Leg

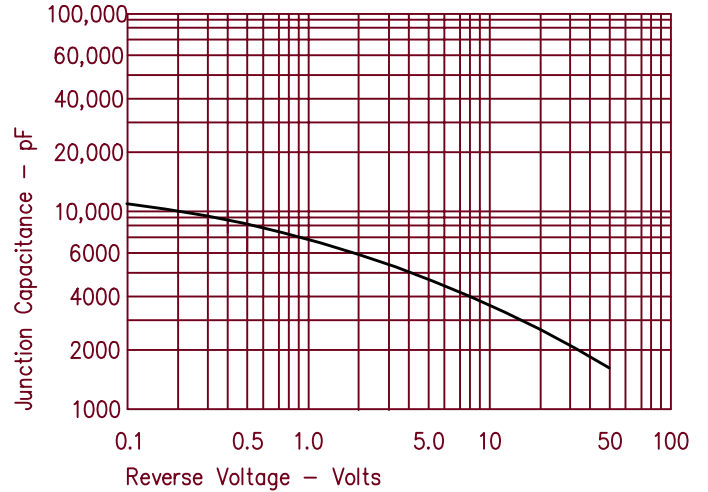


Figure 4
Forward Current Derating — Per Leg

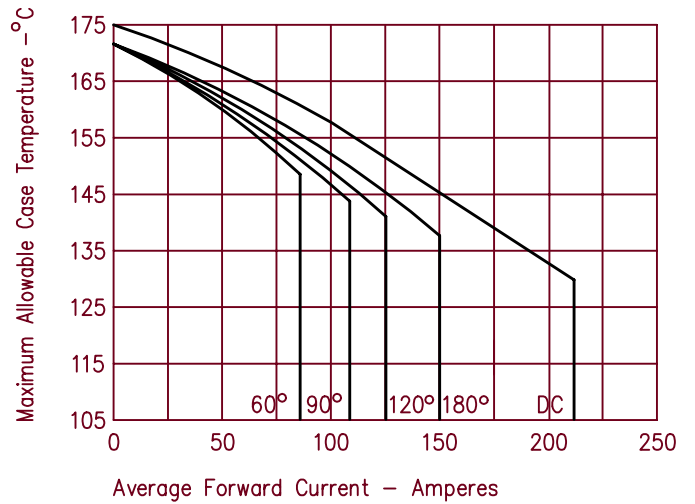


Figure 2
Typical Reverse Characteristics — Per Leg

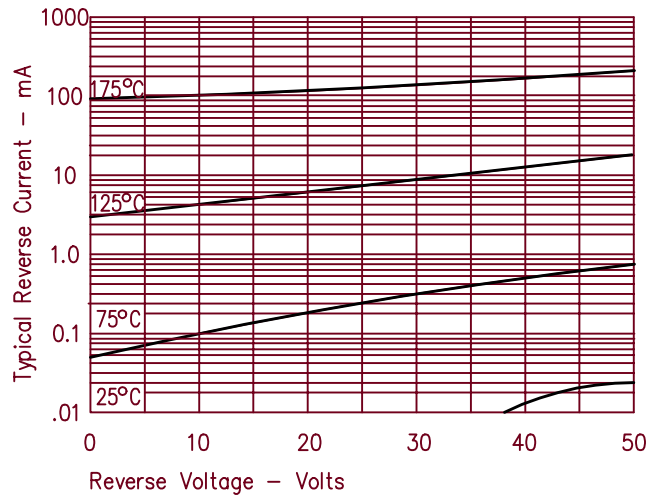


Figure 5
Maximum Forward Power Dissipation — Per Leg

